

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

REMARKS

Claims 1-6 are pending in the present application and are rejected. Claims 1-3 are herein amended.

Applicants' Response to Objections to the Drawings

The Office Action states that the “spiral flow path” must be shown in the drawings or cancelled from the claims, since the drawings must show every feature of the invention specified in the claims. It is noted that claim 5 recites that “the oil path comprises a spiral flow path.”

In response, Applicants respectfully submit that illustration of the spiral flow path is not necessary. According to 37 CFR 1.83:

Conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (*e.g.*, a labeled rectangular box).

Applicants respectfully submit that an oil trap comprising a spiral flow path is a conventional feature.

Figures 5A and 6B illustrate an oil trap 6 generally, only Figure 7B specifically illustrates an oil trap having a bent flow path. This representative illustration of an oil trap 6 may be used interchangeably with other types of oil traps. In support of this, it is noted that the specification discloses that other types of oil traps may be utilized:

It is not limited to an oil trap 6 according to the second embodiment, which employs a bent flow path with walls 61 disposed inside the oil trap 6. Any trap capable of blocking a lubricant so that it cannot enter a third breather path 52 as oil mist from a second breather path 21d may be selected as an alternative. For

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

example, a flow path configured like a spiral or meshes may be adopted. Page 12, lines 8-13.

Finally, it is noted that in rejecting claim 5, which recites an oil trap having spiral flow path, the Office Action relies on Almen (U.S. Patent No. 1,930,260), which was patented in 1933. Thus, it is clear that an oil trap having a spiral flow path is conventional in the art. Therefore, Applicants respectfully submit that illustration of an oil trap having a spiral flow path is not essential for a proper understanding of the invention. Favorable reconsideration is respectfully requested.

Applicants' Response to Claim Rejections under 35 U.S.C. §102

Claims 1-3 were rejected under 35 U.S.C. §102(e) as being anticipated by Kurihara (U.S. Patent No. 6,666,184).

It is the position of the Office Action that Kurihara discloses the invention as claimed. With regard to claim 1, the Office Action identifies small diameter hole 196 in hollow camshaft 190 as a “first breather path,” oil return port 206 as a “second breather path,” and passageway 188 as a “third breather path.” The Office Action identifies both hollow camshaft 190 and shedder 216 (a component of hollow camshaft 190) to be a “blocking device.” Finally, the Examiner attaches to the Office Action a copy of Figure 6 on which he has indicated “A” which is regarded as a “common case wall.” The Office Action does not appear to address the other limitations of the claims, such as the location of the recited elements.

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

In response, Applicants respectfully submit that Kurihara does not disclose or suggest the invention as claimed for several reasons. First, it is noted that the claimed invention is directed at a breather apparatus for use in a power train having a motor and a gear box. The specification and drawings make it clear that the breather is intended for use with an electric motor, not an internal combustion engine. In order to clarify this issue, Applicants herein amend claims 1-3 to recite an electric motor. Kurihara discloses an internal combustion engine, not an electric motor.

Next, Applicants submit that Kurihara does not disclose a second breather path “formed within the common case wall for communicating with a separation chamber formed within the gear case for separating a lubricant.” As noted above, the Office Action states that oil return port 206 is a second breather path. However, the Office Action fails to identify the location of a separation chamber. The oil return port 206 only provides a passage from the area surrounding crankshaft gear 191 to an oil chamber in the crankcase 184. Therefore, oil return port 206 is not a second breather path as claimed.

With regard to the third breather path, Applicants respectfully submit that Kurihara does not disclose a third breather path “provided for communicating with both the first and second breather paths at an upper portion of the common case wall.” In Kurihara, the passageway 188 may be broadly interpreted as communicating with the small diameter hole 196, although they do not appear to be directly connected with each other. However, the passageway 188 of Kurihara does not communicate with the oil return port 206. In order to pass from the passageway 188 to the oil return port 206, the oil must be expelled from passageway 188 into valve chamber 186,

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

then must leak past “seal 210 back into the cam case 204 and ultimately to crankcase 184.”

Column 6, lines 30-31. Thus, Kurihara does not disclose a third breather path as claimed.

Finally, Applicants respectfully submit that Kurihara does not disclose that “a blocking device is provided so that the lubricant coming *through the second breather path* can be prevented from entering the first breather path,” as recited by claim 1 (emphasis added). Kurihara does not disclose a blocking device which prevents oil coming from oil return port 206 (which the Office Action regards as a second breather path) from entering small diameter tube 196 (which the Office Action regards as a first breather path). Instead, “shedder 216, when rotating serves to prevent oil from flowing back into ports 198 and 200 in the event that cam case 204 becomes flooded with oil when the engine is tipped up on end for an extended period of time.” Column 6, lines 32-38. Thus, hollow camshaft 190 and shedder 216 may act as a blocking device, but not as a blocking device as recited by claim 1.

Oil return port 206 is merely a passage for gravity flow of oil from the cam case 204 into crankcase 184. Oil is then misted by splasher 143 and may enter passageway 192, leading to small diameter hole 196. Therefore, oil is actually designed to travel *from oil return port 206* (which the Office Action regards as a second breather path) and ultimately into small diameter tube 196 (which the Office Action regards as a first breather path), rather than being blocked from such a path. Thus Kurihara actually teaches away from the teaching of a blocking device as required by claim 1.

Next, Applicants address the rejection of claim 2. It is the position of the Office Action that Kurihara discloses that the passageway 188 is formed within a cover wall of a rocker cover

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

108, and the hollow camshaft 190 is at a joint between the cover wall and the “common case wall” A, and comprises an oil return section. The Office Action also states that Kurihara discloses an oil trap, in the form of breather 214.

First, Applicants submit that the passageway 188 is not formed within a cover wall. The Office Action states that rocker cover 108 is a “terminal cover.” It is noted that rocker cover 108 is only present in Figure 1, which illustrates a different embodiment than Figure 6. However, Figure 6 also discloses an unlabelled rocker cover. Additionally, Applicants note that the Office Action fails to identify “a terminal” of the motor. For clarification, Applicants note that the recited terminal is a terminal of the electric motor. Kurihara does not disclose a terminal cover covering a terminal of an electric motor.

As specifically stated in Kurihara, “[c]rankcase 184 is connected to valve chamber 186 via passageway 188 formed by an external tube and internal passageway extending through camshaft 190.” Column 6, lines 1-4. Thus, as illustrated in Figure 6, passageway 188 is not formed in a wall of any kind, and rather is external. Thus, Kurihara does not disclose the third breather path of claims 2 and 3.

Further, the Office Action indicates that the hollow camshaft 190, regarded as a blocking device, is disposed at a joint between a cover wall and the common case wall. The Office Action states that this joint is the connection between hollow camshaft 190 and camshaft drive gear 193. Since neither of these elements are walls, it is unclear how the Office Action arrives at this conclusion. Thus, Applicants respectfully submit that Kurihara does not disclose the blocking device of claim 2.

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

Finally, Applicants address claim 3. It is the position of the Office Action that breather 214 is an oil trap. However, claim 3 requires that the oil trap is formed in the blocking device. Since breather 214 is not formed in the hollow camshaft 190 (which the Office Action regards as a blocking device), it cannot be an oil trap as recited by claim 3.

In conclusion, Applicants respectfully submit that Kurihara does not anticipate any of claims 1-3. The Office Action has not shown that each of the limitations of the claims is present in Kurihara. Instead, the Office Action appears to have made the rejection based on the presence of some of the recited elements, without regard to the recited relationship between these elements. Applicants respectfully traverse the rejection. Favorable reconsideration is respectfully requested.

Applicants' Response to Claim Rejections under 35 U.S.C. §103

Claims 4 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kurihara in view of Blanc et al. (U.S. Patent No. 5,205,848).

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kurihara in view of Tada (U.S. Patent No. 6,435,993) or Almen et al. (U.S. Patent No. 1,930,260).

It is the position of the Office Action that Kurihara discloses the invention as claimed, with the exception of a bent flow oil trap, a mesh flow oil trap, and a spiral flow oil trap. The Office Action relies on Blanc, Tada, and Almen to provide these teachings.

In response, Applicants respectfully submit that claims 4-6 are patentable due to their indirect dependency on claim 1, which Applicants submit is patentable for the reasons discussed

Amendment
Serial No. 10/626,598
Attorney Docket No. 030787

above. Applicants respectfully traverse the rejection. Favorable reconsideration is respectfully requested.

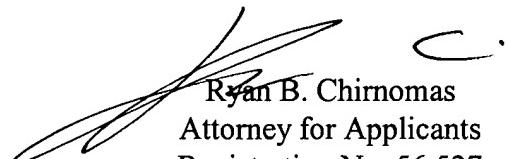
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned agent.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Ryan B. Chirnomas
Attorney for Applicants
Registration No. 56,527
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

RBC/jl